

IN THE CLAIMS:

Please amend claim 35 and withdraw claims 31-34 as follows.

1 - 17. (Cancelled)

18. (Previously Presented) An installation for the heat-treatment of parts comprising:

a rotary hearth furnace adapted to be rotated in a timed manner and comprising outer and inner walls for limiting a furnace chamber,

said furnace chamber having vertically movable doors adapted to divide up said furnace chamber into a heating zone and at least one treatment zone;

a first opening provided in said outer wall for charging said heating zone,

first means for closing said first opening,

a second opening provided in said outer wall for discharging a downstream treatment zone,

second means for closing said second opening,

said installation further comprising:

transport means for transporting said parts into and out of the hearth furnace, quenching bath means for quenching said parts after treatment in said rotary hearth furnace; and,

sluice means arranged to connect said second opening and said quenching bath means.

19. (Previously Presented) The installation of claim 18 further including a charging sluice disposed adjacent said first opening.

20. (Previously Presented) The installation of claim 19 wherein said sluice means and said charging sluice have at least one sluice door each disposed substantially at right angles to the associated opening in said outer wall.

21. (Previously Presented) The installation of claim 18 wherein the two openings for charging and discharging are disposed at a circumferential distance of substantially 45° from each other.

22. (Previously Presented) The installation as claimed in claim 18 wherein the first opening and the second opening are both provided as charging and discharging openings.

23. (Previously Presented) The installation as claimed in claim 18, wherein the first opening for charging is disposed vertically above the furnace chamber and is coupled to a charging sluice disposed vertically above the furnace chamber and designed as an elevator sluice.

24. (Previously Presented) The installation as claimed in claim 18, wherein a second quenching means is connected to the rotary hearth furnace by means of said sluice means.

25. (Previously Presented) The installation as claimed in claim 24, wherein the second quenching means is selected from the group consisting of a quenching bath and a gas quenching chamber.

26. (Previously Presented) The installation as claimed in claim 25, wherein said first and second quenching means are operated at different temperatures.

27. (Previously Presented) The installation as claimed in claim 18, wherein at least one of said openings for charging and discharging said parts has a pusher device associated thereto for conveying said parts through said opening.

28. (Previously Presented) The installation as claimed in claim 18, further comprising a vertically movable door for changing the length of at least one of said heating and treatment zones.

29. (Previously Presented) The installation as claimed in claim 28, wherein all doors are individually controllable.

30. (Previously Presented) The installation as claimed in claim 21, wherein one of said vertically movable doors is disposed in said circumferential distance of substantially 45° between the first and the second opening.

31. (Withdrawn) A rotary hearth furnace for the heat-treatment of parts comprising:
a rotary hearth adapted to be rotated in a timed manner,
an outer and an inner wall for limiting a furnace chamber,
vertically movable doors for dividing said furnace chamber up into a heating zone and at least one treatment zone,
a first closable opening for charging and discharging, said first closable opening being disposed in the outer wall adjacent to the heating zone,
a second closable opening for charging and discharging, which is disposed in the outer wall adjacent to the heating zone and at a distance to said first opening, and,
said rotary hearth being adapted to be rotated in both directions.

32. (Withdrawn) A rotary hearth furnace as claimed in claim 31, wherein the heating zone extends over an area of substantially 90° between said first and said second opening.

33. (Withdrawn) The rotary hearth as claimed in claim 31, wherein at least two treatment zones are provided each adjoining said heating zone, said at least two treatment zones being adapted to be set to different treatment temperatures and different treatment atmospheres.

34. (Withdrawn) The rotary hearth furnace as claimed in claim 31, wherein doors are provided on both sides immediately next to the opening for charging and

discharging so that a charging and discharging zone is provided.

35. (Currently Amended) An installation for the heat-treatment of parts comprising ~~the rotary hearth furnace as claimed in claim 31, further comprising:~~

a rotary hearth furnace including:

a rotary hearth adapted to be rotated in a timed manner,

an outer and an inner wall for limiting a furnace chamber,

vertically movable doors for dividing said furnace chamber up into a heating zone and at least one treatment zone,

a first closable opening for charging and discharging, said first closable opening being disposed in the outer wall adjacent to the heating zone,

a second closable opening for charging and discharging, which is disposed in the outer wall adjacent to the heating zone and at a distance to said first opening,

said rotary hearth being adapted to be rotated in both directions,

transport means for transporting the parts into and out of the rotary hearth furnace,

first quenching means,

a sluice disposed adjacent the second opening,

second quenching means designed as a quenching bath and connected to the second opening for charging and discharging the rotary hearth furnace.